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Fish Hatchery Operations, pages 14-15

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Photo by V.S.C.C.

October Woods



VIRGINIA WILDLIFE

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A Monthly Magazine for Higher Standards of Outdoor Recreation Through Wildlife Conservation

COMMONWEALTH OF VIRGINIA



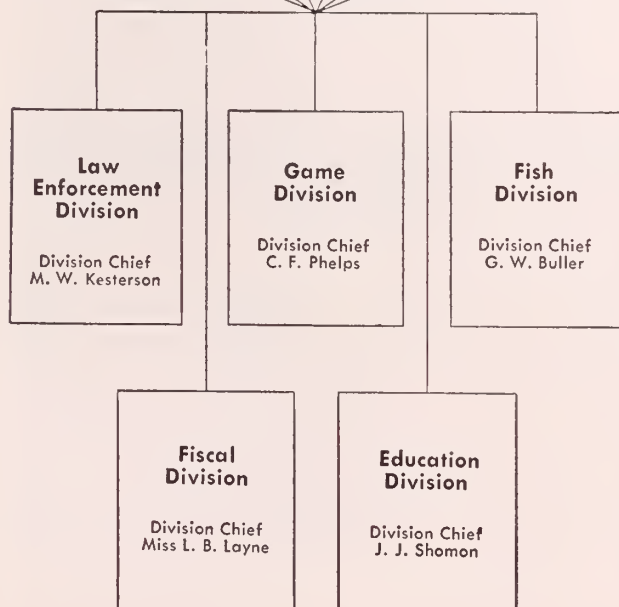
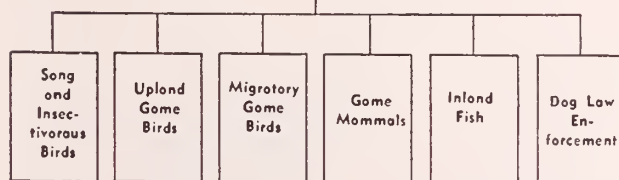
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Cover Photo

One of Virginia's forest residents poses for his photo. The grey squirrel is fast and wary in the woods and mighty fine eating on the table!

Photo by Allan D. Cruickshank from National Audubon Society

VIRGINIA WILDLIFE gratefully receives for consideration all news items, articles, photographs, sketches and other materials which deal with the use, management and study of Virginia's interrelated, renewable natural resources:

WILDLIFE

SOILS — CONSERVE — WATER

FORESTS

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J. J. SHOMON—Editor

R. T. SPEERS—Associate Editor

Conservation and the New War Effort

AS THE FINAL PAGES of the October issue of *Virginia Wildlife* are being readied for the printer and your editor begins the familiar task of preparing himself for two weeks of organized reserve military training, it seems only proper that our attention be drawn to the importance of conservation in the new war effort.

Wars always take a great toll of everything: human life and energy, food, material, money. With every new war we dig deeper into our natural resources cupboard, sparing nothing to uphold the democratic ideals menaced by the shackles of growing communism. Not one ounce of material, not a single item of equipment is spared if it will mean the saving of one human life. In time of war we give freely of our energies, of all that we possess, for this is the American way. However precious may be some basic ingredient, no matter how lacking the supply, somehow, somewhere we get it and make it available to our Nation in time of distress.

Our greatest danger, however, is not Korea, not the spread of the communist doctrine. It is in growing weak from within.

Americans take great pride in the realization that they have created an empire second to none in the short space of three centuries. This has been accomplished, however, only because our land has been abundantly supplied with rich, life-sustaining resources and that it has become populated with a resourceful citizenry.

But the hand of time has turned and with it the human population has grown here and everywhere. Within six generations the earth's population has increased from 700,000,000 to 2,000,000,000.

The last century has seen the most brutal, most savage and destructive wars in history. Yet the population during this period has more than doubled. War costs have been staggering. In this country alone, war expenditures, based upon individual war casualties, rose from \$2,000 in the War Between the States to \$20,000 in World War I, and no less than

\$200,000 per individual war casualty in World War II.

The steadily rising human population, coupled with sky-rocketing war expenditures point to only one thing, that of still further encroachment upon our basic resources. To pay these alarming war costs and to feed the ever increasingly hungry mouths in our own country and much of the rest of the world, means that we must dig even deeper into our natural resources cupboard. If ever there be need for conservation practices, it is now and always when our Nation is in peril.

Today a new major conflict threatens the peace of the world. It is time to marshal a militant watchfulness over everything we possess, lest our basic assets be exploited to dangerous levels, as they were in World War II. Conservationists and the average American citizen appear to be better prepared to the exigencies of war profiteering, graft, food hoarding, and exploitation than they were a decade ago. This is the hour of teamwork, collective action to fight those insidious forces at work that would endanger our Nation in time of war.

America is still the wealthiest nation on earth, still the most powerful, still richest in natural wealth: soil, water, plant and animal life, minerals. We still remain the land of opportunity, freedom. To the extent that we apply wise management and frugal utilization of our life's sustaining resources, we can yet remain a great nation and a great power. If we fail to understand the simple fact that the survival of modern man depends on intelligent conservation of all natural resources, then we can expect—and rightfully so—to shrink to the deflated status of a second-rate power with impoverished land, depleted forests, silted waters, wasted wildlife, and a disheartened and poverty-stricken people.

This can happen and happen easily. BUT WE CANNOT LET IT HAPPEN AND IT WILL NOT HAPPEN IF EVERY AMERICAN WILL DO HIS SHARE IN THE NEW WAR CRISIS.

—J. J. S.

The Chickahominy

By JOHN H. GWATHMEY

WHETHER THE MUSICAL name of the Chickahominy was original or was taken from the tribe which lived along its banks when the white man first came to Virginia is a matter of conjecture. From earliest times to the present it has been a river of peculiar historical and romantic interest. Down through the years it has continued to be one of the most remarkable streams along the Atlantic Seaboard, not for purposes of commerce and industry, but for the enjoyment of the people because of its abundance of game and fish.

It was on the Chickahominy, near the site of what is now Bottoms Bridge, in December of 1607, that Captain John Smith was captured by the Indians. He was paraded for weeks among the tribes as an important prisoner of war. This was the prelude to a grand assemblage at which he was to be executed. That his brains were not beaten out before the eyes of the blood thirsty savages was because of the dramatic intercession of little Pocahontas, favorite daughter of the Indian king.

Smith and his party were on a voyage of discovery, seeking to find the headwaters of the river. Belief still prevailed among the authorities in England that a short route might be found to the South Seas. They found that the Chickahominy is among the shortest of Virginia's large rivers. Above the point where the tide ceases to ebb and flow, the stream is hardly more than a sizeable creek.

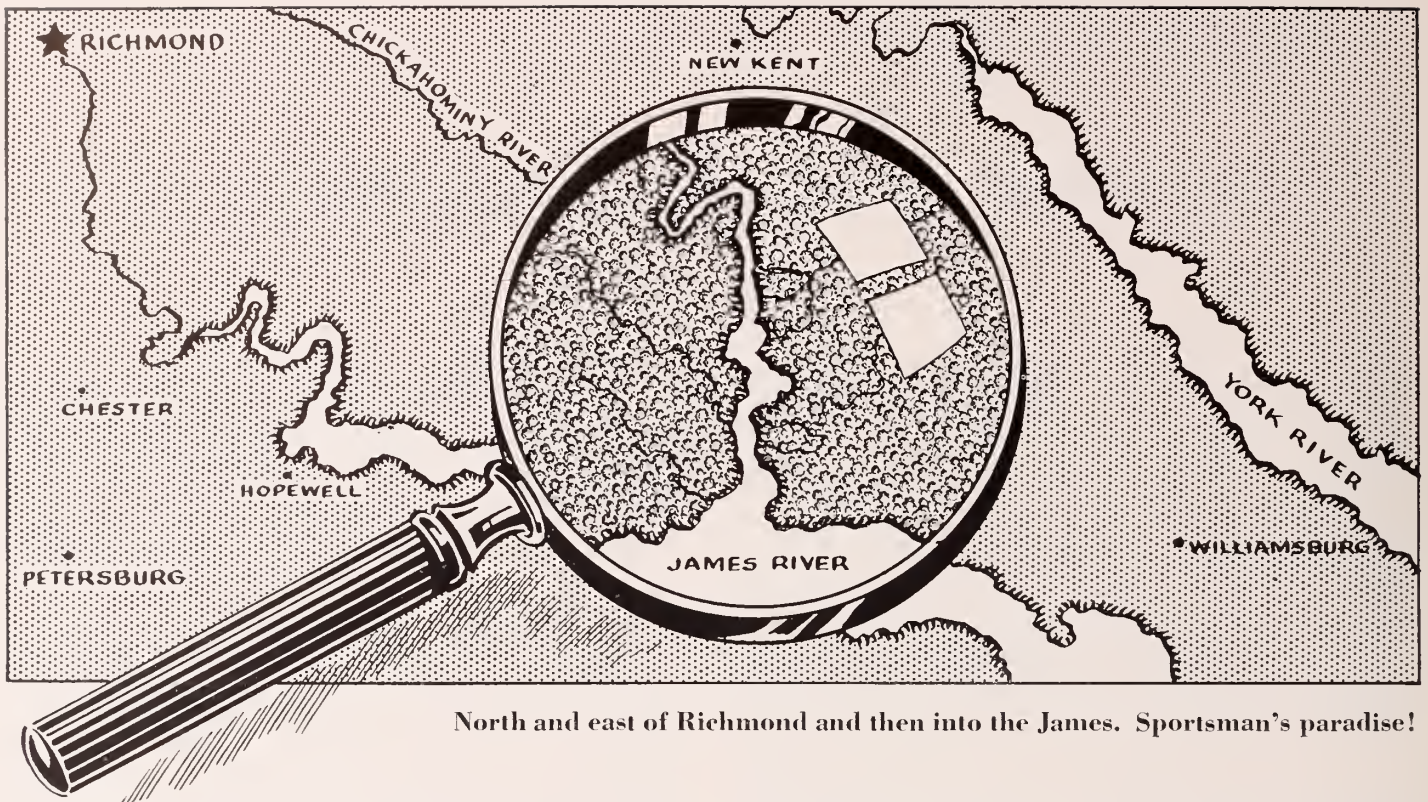
Captain Smith described what he saw in the Chickahominy in 1607 in quaint Elizabethan English: "More plentie of swanns, cranes, geese, duckes and mallards, and divers sorts of fowles, none would desire." He also referred to the tremendous numbers of fish, especially sturgeons.

As was the case in Captain Smith's day, deer are plentiful and are increasing in numbers. The great fastnesses of the Chickahominy marshes have always afforded refuge, where neither hunters nor dogs could follow. Always the wildlife and the fish in its waters have been the dominating features of this remarkable inland stream. Perhaps the finest musk-

The Chickahominy has meant hunting and fishing to generations of Virginians.



Photo by Kesteloo



North and east of Richmond and then into the James. Sportsman's paradise!

rat marshes of the state are within this area, and the Chickahominy has afforded a livelihood for generations of commercial fishermen.

The river has always had several desirable characteristics in the eyes of the hunter and angler. It is unpolluted through human activities. Because of its limited watershed and its extensive upland swamps which screen out any mud which comes into its waters through soil erosion, the river is always clear. Because of its small drainage area, there are few periods of high water. When there are excessive rains, floods are quickly carried off with the outgoing tides and emptied into the James.

While numerous villages of the Chickahominies were referred to in early writings, there have never been extensive settlements of the white man along its shores. The reservation of the remnants of the old tribe is still intact. Here and there are residences on the high bluffs, but in the main, the lower Chickahominy is, and always has been, a mysterious region of broad marshes with a beautiful river and its many tributary creeks flowing through them. It is conceivable that, even now, there are isolated areas which have not yet been explored.

As white civilization spread westward and modern firearms and fishing tackle developed, sportsmen soon visualized the possibilities of the Chickahominy. For a hundred or more years after the settlement at Jamestown, the area was an important source of food in the form of game and fish. But before the turn of the present century, men recognized the river and its great marshes as a paradise

for the hunter and angler. It remains to this day as perhaps the most important stream in Virginia from the standpoint of the sportsman, all the way from its broad mouth where it joins the James to its extreme upper reaches where small boys catch minnows and shoot squirrels along its banks.

Perennially a dropping-off point for the vast migrations of ducks and geese, many years ago men organized clubs to enjoy the waterfowl gunning, and individuals built blinds without number. Two of the old clubs, the Powhatan and Wrights Island, continue to afford some of the best shooting in the state. At a later date, and further up the river, were the Four Seasons Club, the Wild Rose, the Idle Hour, Mattahunk, Dancing Point and other clubs, and innumerable groups and individuals have been hunting and fishing along the stream for years.

In the registers of the old clubs it is indicated that shooting sora vied in popularity with gunning for ducks and geese. Along the river are many of the best sora marshes in existence. In the old days they recorded their kills of sora by the dozen. Annually, with keen expectancy, hunters watched for the arrival of these secretive little birds as they dropped into the marshes after their nocturnal migratory flights from the North.

Few extraordinary kills of waterfowl are recorded in the old registers, for an understandable reason. It was not that waterfowl were not numerous. But while the market hunters were slaughtering ducks from blinds over bait, and "slapping" sora for the market with lanterns at night, sportsmen were par-



Photo by Shomon

Walkers' Dam is one of the best fishing spots—both above and below the concrete structure.

tial to jump shooting. Guides paddled them through the creeks in silence and they shot their ducks on the rise. The emphasis among sportsmen was on the sportiness of the shooting. This form of gunning is still popular on the Chickahominy.

It has always been customary to hunt deer with dogs, a practice which it has been hard for some deer hunters who have never visited the Chickahominy to understand. Virginia hunters argue that if dogs were not used, there would seldom be a chance of bringing their quarry out of the dense cover into the open. Eternal vigilance is required to keep unscrupulous gunners from shooting helpless deer in the water.

Down through the years, fishing in the Chickahominy has been superlatively interesting. Rockfish come into the river in great numbers. The numerous creeks which flow into the river below tidewater, such as Gordon's, Yarmouth and Diascund on the left and Morris' and Tomahund creeks on the right, are teeming with largemouth bass and various species of panfish. Bass lurk at the edges of the weeds and tuckahoes in the river itself.

In very recent years—specifically in 1942—the Federal Government built a low dam across the Chickahominy at a narrow bend near Walker's Station. This dam is only a foot above mean high water mark, with a man-operated lock for the passage of boats. Unusually high tides sometimes flow entirely over the dam, and at normal high tides fish pass up and down the stream through a spillway in its center and through the navigational lock.

This dam has created a highly unusual fishing situation. In 1944 it was learned that below the dam, white shad, which came up the river in great numbers to spawn, could be taken with artificial



Photo by Shomon

"Slapping" for sora is one of the top sports available in the marshes of the Chickahominy.

lures. Anglers flocked to the place and caught shad on hook and line by the hundreds. Shad are still caught there by the anglers each Spring, but the shad population has decreased in the past few years.

The dam created a lake several miles in length, which is a tremendous boon to anglers in the heart of one of the most populous areas of the State. In fact, Chickahominy Lake is one of the most important recreational assets that Virginia can boast. The angling for various types of native fresh-water game fish is excellent and is enjoyed by thousands.

When the dam was built, backing still water up into vast stretches of marshlands, great abundance of food was created for aquatic life. The fishing was good both before and after the dam was constructed, but it was noticeably better shortly after this artificial situation was created. If there is any diminution of the fish populations, despite the heavy fishing, nobody can notice it.

It is generally believed that game fish come up the river and through the dam. Finding conditions to their liking, they stay in the lake. Thus this great body of inland fishing water is constantly replenished with stocks of the most desirable of native game fish. What effect, if any, the dam has had upon the spawning of the anadromous fish, such as shad and herring, has not been determined.

Above this lake and above the point where the tide formerly ceased to ebb and flow, the Chickahominy still affords interesting fishing for a great many people. Although the river is hardly more than a creek, as it meanders through dense upland marshes, there are few road crossings where anglers may not be seen daily, enjoying the angling for pickerel, bass, bream and other species. Still further

(Continued on page 12)

More Fishing Water

By R. W. ESCHMEYER*

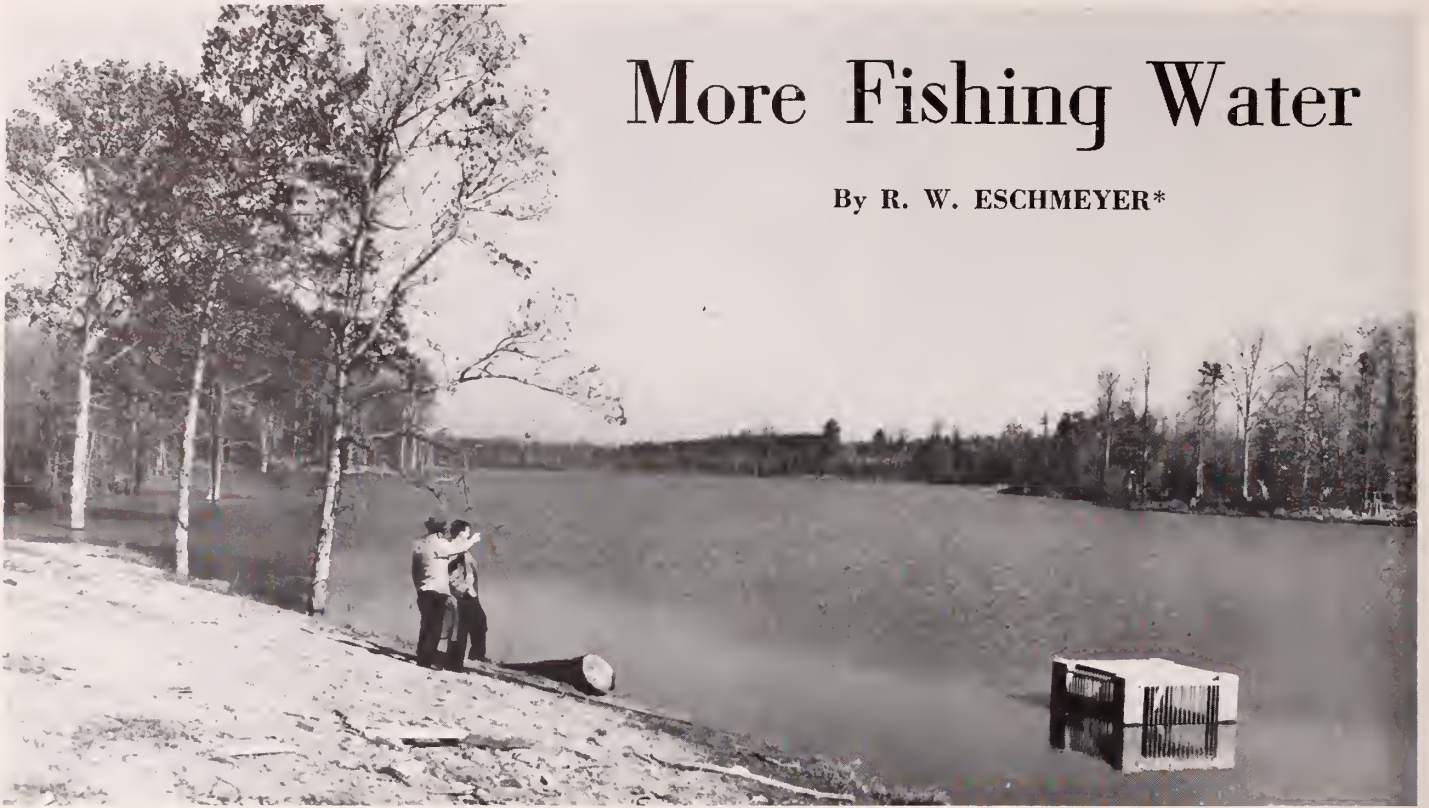


Photo by Shomon

More fishing water for Virginians. The first of the Commission's fishing ponds, Lake Gordon, following construction.

IF THERE'S A really big demand for beef, we can increase the supply some by raising better strains of cattle, or by improving the pasture. But if that demand is really great, we will meet it mainly by putting more acres into pasture. That goes for our aquatic "livestock" too. Fishing pressure is going up and up. Every year more people enjoy this favorite way of relaxing. In a state like Virginia, with only limited inland fishing water, by far the most important thing that can be done is to furnish the angler with more fishing water. Virginia anglers may well be proud of the Commission's lake building program. It's the most important program on the books.

Here's the picture in a few words. In the United States, over 15 million fishing licenses are now sold, and the number keeps going up. Nevertheless, our waters go right on raising a limited poundage of fish.

That poundage isn't very high—it can't be. Fish need a lot of food. Trout experts tell us that a stream supporting 35 pounds of trout to the acre is doing exceptionally well. Some lakes support several hundred pounds. Our aquatic "pastures," like our land pastures, can support only about so

much "livestock."

Another problem enters the picture. You can only catch a part of what is produced. In most waters, the hook-and-line fishing can harvest less than half the crop. Fishing differs from hunting in one important respect—it's less efficient. To cite a simple example, suppose we "fished" for rabbits by putting a piece of carrot on a hook and waiting behind a tree for a rabbit to take it. We wouldn't get most of the rabbits. In fishing, we must compete with the natural food, and every time we catch a fish, we temporarily lessen the demand for the food. By the time half the fish have been removed, there's a lot more food, temporarily, for the remaining ones. Our lures get more competition.

So here's the situation. More and more people want to catch fish, yet our waters go right on producing a limited supply of fish, and we can catch only a part of that supply.

In areas where we haven't much fishing water, our individual share of the catchable part of the fish crop is getting quite small. Where fishing demand is heavy, our share is too small to be attractive. What can we do about it?

In regular business, there is a simple answer, but it can't be used in fish conservation. When the demand for a commodity gets too great, we simply raise the price. Fishing would be better if the state

*Dr. Eschmeyer is the executive vice-president of newly formed SPORT FISHING INSTITUTE of Washington, D. C. He is an eminent fisheries scientist, whose work with T.V.A. has given him world recognition. As the new head of the Institute, Dr. Eschmeyer hopes to dedicate his work to the improvement of fishing in America by supporting sound conservation programs, with emphasis on fact-finding and education. He says that it is the hope of the Institute to "shorten the time between bites."

*The answer to more fishing pressure is
more fishing water. Here's the reason
for Virginia's pond building program.*



Photo by Shomon

The "sidewalk engineers" have a field day whenever a new pond is built. Huge earth moving machines build a dam in short order.



U.S. Forest Service Photo

Fishing is real recreation. Thousands of Virginians find rest and relaxation on lakes and streams from the Blue Ridge to the Tidewater.

charged some exorbitant license fee because fewer people would fish. We couldn't use this method for two reasons. The fish belong to all citizens of the state. A high fee would discriminate in favor of a few of the "owners." The other reason is a very important one, too.

Even though we already have too many anglers, we should encourage more people to fish. They don't need the fish as meat. You can buy meat a lot cheaper than you can catch it. But folks do need to relax. Doctors tell us that mental ailments, heart ailments, and intestinal disorders are on the increase. We're living too fast. In our effort to "keep up with the Joneses," or to get ahead of them if possible, we're under constant strain. We need to relax more. Fishing contributes to human health. The many anglers should be provided with satisfactory fishing if at all possible.

There are a number of things which can be done to increase the yield. But even if the Commission could double the fish supply in Virginia's limited existing waters, it still couldn't meet the demand. The big answer to the fishing problem is simply—give the anglers more fishing water!

A carefully managed state-owned fishing lake of 50 to 200 acres can really produce fish. In Tennessee one of these lakes—a 60-acre one—yielded 120 pounds to the acre in 1948. This 60-acre lake supported 6,437 fishing trips in one year, and the average catch per person per day's trip was 1.2 pounds (accurate weight!) That's a lot of fishing and a lot of fish.

So Virginia's lake building program is really important. Anglers should give it their whole-hearted support. Of course, in urging this program I may have a personal motive. The chances are that Virginia's fishing pressure may soon go up a trifle more, though the catch will probably not be affected by this particular increase in pressure. That state across the river from my Washington office looks mighty inviting. The chances are better than even that I'll soon be a former Tennessean, working in Washington but living in Virginia.



S.C.S. Photo

Good food and escape cover provide a perfect spot for Bobwhite.

Bobwhite Quail as a Farm Crop

By MARTHA TREVER

SPORTSMEN OFTEN DREAM of the days when Indians roamed America's forests—lands teeming with bear, deer, and grouse. But the bobwhite quail, one of our favorite gamebirds, is probably more abundant today than it was in the time of the mighty Hiawatha. This is because the bobwhite thrives where open feeding areas are found adjacent to good protective cover, and in the days gone by, such conditions were satisfied only by unusually open forests or the prairie edges.

With the arrival of the pioneers and the beginning of crude agriculture, a new habitat was created—a habitat ideal for quail. There were small fields separated by overgrown rail fences which offered good protection against enemies, and open woodlands with plenty of food plants. Quail became abundant wherever such conditions existed, and soon the rather restricted species became a gamebird especially noted for its wide distribution.

Because quail are a product of the farm, the destiny of this popular gamebird is controlled largely by the farmers' management techniques. And since the quail is a sedentary species with individual

birds travelling less than a mile from the birthplace during their entire life span, each farmer directly influences the quail population of his own land. By the conditions which he creates, he can either greatly increase or greatly decrease the number of birds which his farm is able to support.

How can the carrying capacity of the land be increased? First of all, plenty of suitable cover is needed. Clean farming, by keeping brushy areas at a minimum, may render large areas with good food unfit for use by quail. The covey must have viney tangles near the food supply so that the birds may feed and rest without fear of sudden attack by their natural enemies.

Shelter cover is important too, and very necessary for protection against the severe winter storms which so often end in bobwhite tragedy. Close-set thickets and low-branching evergreens make good natural cover for this purpose, and it may be improved by planting evergreen trees and shrubs, hawthorns, and berry bushes. If no such cover is present, it is a good plan to leave brush piles or fallen, untrimmed trees as temporary protection

until natural growth can be established.

Of primary importance is the provision of a safe place for nesting. This may be furnished by alfalfa, or sericea lespedeza, or even broom sedge, but a wise quail will not accept the best of nesting spots unless a good thicket for escape is nearby. An abundance of escape cover may be assured by allowing natural growth along fence rows, roadsides, and ditches. Early maturing grains may be planted so that the birds can nest in safety after the grain is cut.

One of the easiest ways to improve quail cover is the use of living fences such as multiflora rose. When grown into a dense hedge, the multiflora rose is an effective barrier, and as it takes little from the soil and does not spread out rapidly, crops may be grown right up to its borders. Although it grows slowly, taking over three years to become sufficiently dense and requiring protection from grazing during this period, the multiflora fence provides excellent cover and travel lanes without much loss of land to the farmer.

The next problem to be considered is that of providing a constant food supply. Where natural food is not abundant or the winter supply is habit-

A well planted food patch helps out through the winter!

Photo by Kesteloo



ually low, the planting of food strips will greatly enhance the value of the land for quail. As most farmers are not able to set aside much land for wildlife food crops, the plants used must be of a kind that will produce a heavy yield of food. Lespedeza, sorghum, vetch, cowpeas, corn, soybeans, millet, and sunflowers are able to do this. It is very important that these food strips be planted adjacent to good cover, for enemies, learning that a covey is using a certain strip at a certain time each day, may pick them off one by one unless escape cover for a quick getaway is near at hand. Bicolor lespedeza is a favorite wildlife border in the southeastern states. A strip of this bushy lespedeza adjacent to adequate cover, plus the variety of food produced by nearby woodland and cropfield, make a top-notch quail habitat. As bicolor is a perennial, once established it needs little more attention.

Under normal climatic conditions, water supply is no problem. However, a farmpond is a good safeguard against long, dry spells during which juicy insects and fruit may not be available.

All of these management techniques may seem like a lot of expense and bother, but in reality each will serve the farmer in many ways. For example, strips of bicolor not only increase the quail food supply, but also help to prevent erosion of the cropfield edge. Selective cutting and thinning of the farm forest make available an increased food supply and at the same time are integral parts of a forest management program. The dense shrubbery often planted to curb erosion in gullies makes the best of escape cover. Almost any soil conservation measure improves conditions for bobwhite, and inversely, quail habitat improvement work contributes to soil conservation. Thus the measures taken to increase bobwhite will make the entire farm more valuable.

A word of warning about stocking—each quail range has a definite saturation point, a specific number of quail which it is able to support. Even if the population falls considerably below this number because of over-shooting, and other factors which should not occur, natural restocking from another area will take place. Therefore stocking, which is seldom necessary, is a waste of time and money. The only way to increase the population on a given area is to improve the quality and amount of the food and cover by methods such as those discussed above.

Estimating just how much of the quail population may be taken without danger each year is a problem indeed. It is a recognized fact, however, that shooting is best done early in the fall so that the

(Continued on page 12)

BOB WHITE QUAIL

(Continued from page 11)

kill will consist of surplus birds, which would probably be killed off anyway during winter hardships. If shooting is done in the winter, when the population is at its lowest ebb, there is a strong likelihood of necessary seed stock being removed. The annual peak in population is reached in November, after which there is a steady decline until May.

The farmer can receive a direct financial return for his work by renting shooting rights to sportsmen on a per bird, per day, or per season basis. Extra profits may be gained through guiding, boarding dogs, serving meals to visitors, etc. However, even if the farmer does not wish to avail himself of this side income, the quail will be a source of pleasure and recreation for his own family.

Sporting clubs are often ready to lend a hand in planting of food strips or establishment of temporary cover in return for shooting privileges, and state conservation departments and game commissions are intensely interested in such work. Extensive education projects have been planned by some states, and seeds and seedlings of quail food plants have been distributed through the cooperation of the Commission of Game and Inland Fisheries and the Soil Conservation Districts.

By such cooperation between farmers, sportsmen, and states, the bobwhite quail population will surely be brought to an all-time high.

CHICKAHOMINY

(Continued from page 7)

up, the stream is wadeable in stretches, and the pools furnish endless delight for the cane pole fishermen who reside along the stream.

Few river basins in this state, or any other, have had the unique distinction of appealing primarily to the sportsman. This is, and always has been, true of the Chickahominy. Few manufacturing plants and no cities are along its shores. Except for the motors of the boatmen, the nets of the commercial fishermen, and a few residences on the hills, the lower Chickahominy remains very much as it was when Captain John Smith first visited it.

Even before the leaves begin to turn in the Fall, sora, apparently as numerous as they ever were, come into the Chickahominy marshes. Later on, great clouds of ducks and geese, not as dense as formerly but still numbering in the thousands, pitch into the lush

marshes to feed. Deer and wild turkeys go about their secretive ways, and muskrats build their houses. Great eagles soar and the ospreys are constantly busy. Blue herons go silently about their fishing.

Among Virginia's many blessings is the Chickahominy, still essentially a wilderness area in the heart of the state. Modern conservation practices lend assurance to the belief that the Chickahominy will always be, as it is today, more valuable as a recreational area for the enjoyment of Virginia's hunters and anglers than for any other purpose.



"Maybe we ought to move back and rush it?"

The LAW Explained

Conducted By M. WHEELER KESTERSON

Chief, Law Enforcement Division

Question: If a soldier is stationed in one county and lives in the adjoining county and he has lived in this particular county for only one month, which county should he apply to for a county fishing and hunting license?

Answer: The soldier is entitled to purchase a county license in the county in which he is stationed.

Reference: Section 29-57 of Code of Virginia of 1950. Page 37, Section 22, Subsection D, of Game Law Pamphlet.

Question: Do we have authority to arrest persons shooting or transporting loaded rifles over fresh water streams below jurisdictional lines?

Answer: Yes, all fresh water streams are considered inland waters. This is a regulation of the Commission adopted by authority in Section 29-125 of 1950 Code.

Reference: Page 104, Game Law Pamphlet; page 16, Section 33, of the Game Law Pamphlet; and Section 29-11 and Section 28-3 of Code of 1950.

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

THE VIRGINIA COMMISSION will act as host at the meeting of the Southeastern Association of Fish and Game Commissioners to be held at the John Marshall Hotel in Richmond, October 16, 17 and 18. Plans for the meeting call for both technical and general sessions to be held throughout the three-day period. All technical sessions will be afternoon meetings.

Dr. H. H. Bennett, chief of the U. S. Soil Conservation Service, and Lyle Watts, chief of the U. S. Forest Service, will be the speakers at the opening sessions on the sixteenth. Albert Day, chief of the U. S. Fish and Wildlife Service, and Michael Hudoba, Washington editor of Sports Afield and an outstanding conservationist, are scheduled to speak on the seventeenth. Mr. Hudoba will head a panel discussion on the question, "Are Game Commissions Failing to Carry Through the Proper Program?"

A banquet will be held on the night of the seventeenth. Senator A. Willis Robertson, of Virginia, who is considered the dean of the conservation forces in the U. S. Senate, will be the guest speaker.

THE ANNUAL MEETING of Federal Aid coordinators of the eleven states comprising the Southeastern region is scheduled this year for October 9 through 14 in Virginia, and will be held in the form of a tour through the Old Dominion to observe game work and projects actually under way in the state.

The main portion of the tour will be spent on the Jefferson and George Washington National Forests looking over the results of the cooperative game program. This program is of outstanding value and has attracted national interest in wildlife conservation circles. Since its inception in Virginia in 1938, it has been adopted by Pennsylvania and West Virginia on national forest holdings in those states. One result of the coming coordinators' tour may be its spread to other areas.

VIRGINIA'S HUNTERS are due for some new reminders of hunting safety this year. Six new posters, each stressing some point in hunting safety, have been distributed in large numbers to game wardens throughout the state, with instructions to post them in conspicuous places in their counties.

The new posters are waterproof, printed in red, black, yellow and white, and put their safety message across in a humorous manner. Posted along secondary roads and in known hunting areas, they are expected to serve as constant reminders of the need for care at all times in the handling of firearms.

In addition to the new posters, the Game Commission has also distributed 200,000 leaflets entitled "Ten Commandments of Safety" to county clerks and other persons authorized to sell hunting licenses. It is intended that every hunter shall receive one of these safety pamphlets when he purchases his license. These pamphlets also stress the need for safety afield and recommend proper firearm handling procedures to the sportsman.

FARMS EMBRACING over 650,000 acres were improved for game as a result of planting last spring. In this phase of the work for the improvement of game habitat on privately-owned lands, 2,295 landowners entered into written agreements. There were a great many other miscellaneous plantings, and the figures quoted do not apply to the habitat improvement on public lands and on refuge and demonstration areas.



General view of Stevensville largemouth bass hatchery.



House with a view! A newly constructed house overlooks the hatchery.

Photos by



Beyond repair. Old Montebello trout pools are replaced by →

Game Commission Fish Hatchery

With more and more just some streams of the Old Dominion every state have been hard pressed to keep

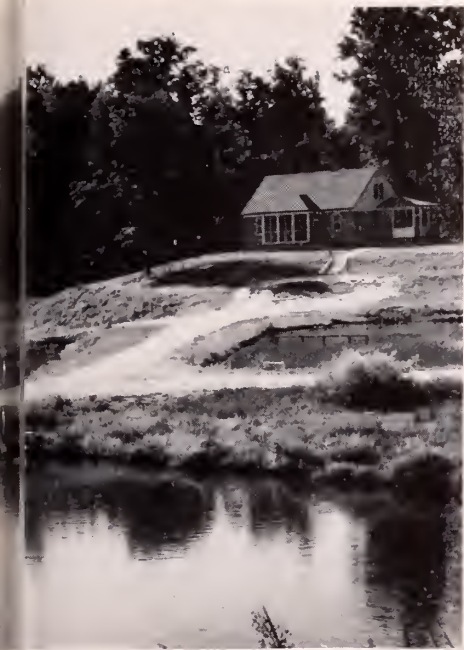
This year modernization and Here are some views of the work stations—Stevensville, Montebello hatchery in Smyth County.



Fish Division personnel get "down to earth" to straighten out a construction point at new Smyth County hatchery.

The carefully chosen site in Smyth County will provide one of the most modern hatcheries in the Southeast.





Manager's residence at Stevensville
rearing pools.

Kieloo

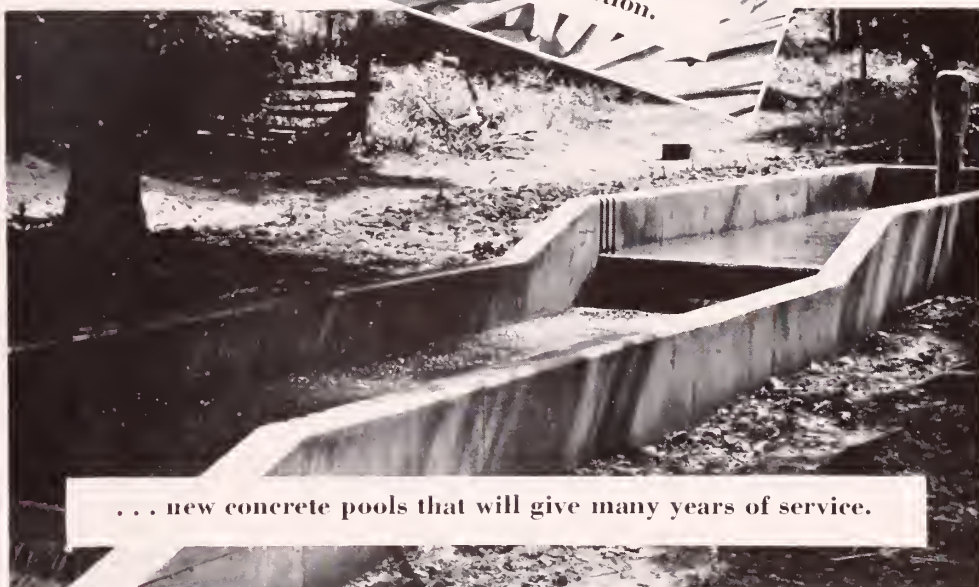
ion Expands Its y Operations

*ermen taking to the lakes and
every year, the batcheries of the
keep up with the demand.*

*and expansion are in order.
work at several of Virginia's
and the new smallmouth bass*

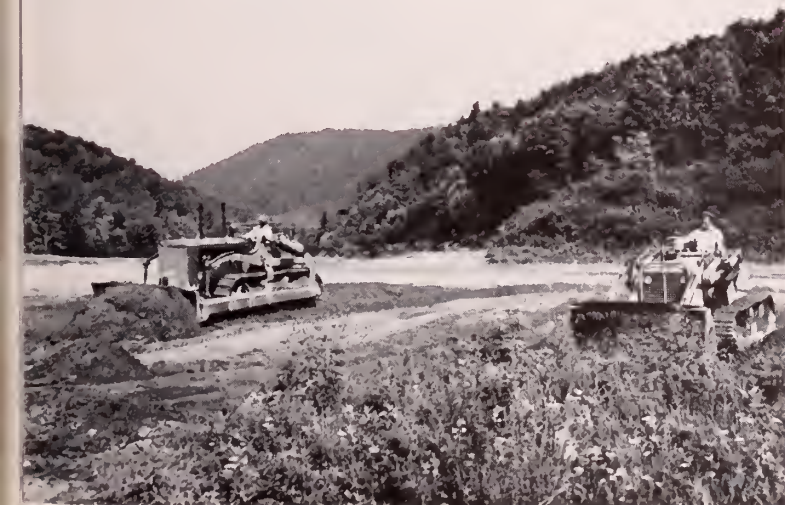


Manager Ramsey looks over new pond construction.



... new concrete pools that will give many years of service.

First step in hatchery construction. Bulldozers strip the top layers from the selected area for rearing pools.



Completion of the main dam at the new hatchery will provide regulated water supply for all fish rearing operations.



Swift and noiseless as a shadow, she sprang from a rock . . . straight at the monster.

The Wanderer

By CHARLES GORDON

*The law of the wild is the
law of survival. The young
mink learned it early.*



IT WAS STILL COLD in early April when the mother mink stole into her dark, inaccessible den by the river and gave birth to four naked, scrawny little youngsters hardly the size of baby field mice. White Hips was the largest and barely two inches long. Next in size came White Chin, his brother, and then the two sisters. It was damp and, at times, a little wet in the den, and in the beginning the mother stayed very close to her new brood, nursing them almost constantly and sharing her protective warmth with them.

Father was away. Family obligations never entered his mind as he roamed the river banks and creeks miles away. From the beginning, his animal ways had taught him that it was the mother's duty to care for the young and raise the family.

And a big responsibility it was, as the mother mink knew only too well. It was difficult to slip away from the babies at first, but when the pangs of hunger and thirst grew unbearable, she would quietly sneak away and get a quick meal. Sometimes it was a frog, sometimes a small fish from the river, and occasionally a meadow mouse or two.

After several weeks the young minks opened their eyes. It was a strange dark world and their want of further exploration made them restless. One day White Hips decided to explore a shaft of white light that filtered through some roots overhead. This bold venture led to a rocky ledge just above the den, and soon thereafter the small minks found a new playground. As the days passed and their bodies grew in size, fresh meat became their diet more and more.

One evening in late May the little minks were playing on the ledge, when they heard a sound as if something was being dragged across the ground. They turned to look up the bluff, expecting to see their

mother bringing something perhaps too heavy for her to carry. Even as they turned to look, a long black shape came sliding down over the edge, stopped for an instant with head raised high and cruel eyes shining—and then darted like a streak straight at little White Hips. The little fellow, brave with the instinct of his kind, turned with a snarl as the snake struck. Although caught in the side, White Hips bit and scratched in a futile effort to get away from the black monster.

But other ears had also heard the sound of that sliding approach, and the mother mink had hurried, swift and noiseless as a shadow, sensing the danger to her children. Even as the snake struck she sprang from the rocks straight at him. Releasing his hold on the little mink, the snake moved to strike at the mother. If he could once get his deadly coils wrapped around her, he would swallow her as well as the young ones. But quick as the snake was, the mink was even quicker, for she sprang back just out of range, and as he struck she caught him by the neck. Over and over they rolled, threshing and twisting in a violent struggle. The snake tried in vain to wrap his body around the mink, but she was as supple as he, and slipped in and out, never releasing her tenacious grip on his neck. Her sharp teeth sank deeper and deeper into his tough flesh until suddenly the great body fell limp, neck broken.

That night, instead of the mink family furnishing supper for the snake, they feasted on him, but before daybreak the mother dragged the remains away and hid it under the river bank.

As the weeks went by and summer came on, the little minks grew fast, and were taught self-reliance instead of dependence upon their mother. During the long hot days the whole family slept in the cool den, but with the coming of twilight they were out

diving into the river and roaming over the fields, always on the hunt for food.

By the time the poplar leaves had turned yellow and the nights were long and cool, the mink family all looked alike. White Hips and White Chin were now larger than their mother, and the two sisters almost as large. The mother no longer provided food—she had taught them all summer how to hunt, and dive for fish, but now they had to find their own food or go hungry.

By winter they no longer traveled as a family unit and White Hips was now completely on his own.

One morning just as the wintry sky was turning pink with the rays of the rising sun, the young mink returned from the night's hunting to a favorite den above the river bank. Carelessness and the inexperience of youth made him miss the glint of metal among the scattered leaves, and the first knowledge of his danger came too late! The steel jaws of the trap closed on his foot and he was caught in a vise-like grip. The young mink jumped back, dragging the heavy trap with him, rolling over and over and biting at the relentless jaws in an effort to force this strange enemy to release him. The more he bit the tighter the trap gripped his foot. Soon, however, natural keenness came to his aid, and changing tactics, he began to pull. Fortunately for him, the trap had been set by an amateur trapper, and was not only too small to hold an animal as strong as White Hips but had been fastened to a solid stub, so that it had no "give." Little by little, as he pulled and strained, the small tapered foot slipped through the steel jaws, until they finally released their hold. White Hips was free! He had learned a lesson he would never forget.

Sore and exhausted, the wounded mink limped away, looking for another den where he could rest and recover. He found the deserted summer home of a woodchuck, and curling up in the nest of dry leaves, he rested for three days waiting for the foot to heal enough so that he could continue his travels. He had been fortunate in his first contact with the devices of man, for the creatures of the wild seldom get a second chance.

Hunger and thirst finally drove him from his temporary home. Though still lame, he had to have food and water. Since he was as much at home in water as on land, river travel was now easier in his crippled condition. Also, by using this route, he did not have to wait too long for food. The flash of a white fin in a shallow pool, and a quick dive brought him back up with a fish which was eagerly devoured. Hunger satisfied and the discomfort of the injured foot relieved by the pleasant mode of

travel, he continued his journey, driven by the wanderlust which was his heritage. Occasionally he left the water, and went by land, but a great deal of time was spent in the water.

The wanderlust was in his blood. Nowhere could he rest for long. However, he wanted a warm meal before he retired for the day. As he glided on up the stream his quick ears caught a sound that brought him noiselessly to the shore. Like a brown ghost the mink glided among the brush until he was close to the noise. His nose told him his prey was near. He stopped and crouched low—he knew that if the mice got a glimpse of him, they'd be gone. Patiently he waited as the mice raced back and forth. Presently one came by his hiding place and quick as lightning White Hips was upon him. Vainly the little rodent jumped and plunged, but it was a one-sided struggle at best, for nature seemed to have made mice just to be food for stronger animals. Having killed his prey, White Hips took it to a hole in the bank where he could eat at leisure. When his meal was finished, he moved on along the stream bank until he located a hole beneath the overhanging roots of a great oak tree. Silently he glided into the shadows to rest until night would fall again, and the whole great hinterland would become his hunting ground.

As the days grew longer, White Hips felt an even more irresistible urge to travel, and with it a new excitement, for there were other mink in his territory. Some, like himself, he met and fiercely fought along sheltered streams or in the tunnels of dark dens. Others, like his sisters, met during this spring restlessness, were not warlike opponents. Instead, these allowed White Hips to enter their dens and even welcomed him, and with the coming of May, remembered his visit with the start of a new family.

White Hips became a father, but it was of no concern to him. His only thoughts were travel, the kill for food, and the occasional battle with others of his kind. There would be no family cares for him, for he was now, as always, the wanderer.

CHANGE IN MAKEUP

With this issue of *Virginia Wildlife*, Neil Payne's grand wildlife drawings will no longer appear on the *outside* back cover but will be switched to the *inside* back page. This change is being made in answer to requests from scores of subscribers who save and frame the drawings, and who have had trouble in the past with the mailing label spoiling the picture. We hope this is the answer!



Photo by Allan D. Cruickshank from National Audubon Society

Barn Owl

OWLS of Virginia

By J. J. MURRAY

OWLS HAVE BOTH puzzled and fascinated man from his earliest beginnings. Evidence of this interest is found in the portraits of these birds on Egyptian sculpture, on the coins of Greece and in medieval paintings. It has traditionally been a bird of ill omen. Many of the mountain people of our State still shudder when they hear the call of a Screech Owl from the roof-ridge, for it is to them the harbinger of an early death in the home. At the same time, because of its grave and judicial appearance, it has always been looked upon as "the wise old owl." In Greek mythology the owl was the emblem of Pallas Athene, the goddess of wisdom.

Like all birds which are unusual in size or which prey on anything which man has come to claim as his own, owls of all species have been mercilessly persecuted. Only their nocturnal habits have enabled them to persist in such abundance. As in the case of the hawks, modern study by practical conservationists as well as by scientists has shown us that the different species of owls vary very much in their economic effect and that most of them are definitely helpful to man's interest.

In the western hemisphere there are some 175 species and subspecies of owls. Since many of these species are wide-ranging, there are many geographic variations (subspecies). For example, there are in North America fifteen recognizable races of the Screech Owl. Eight species, one of them with two subspecies, occur in our state. Four are at least fairly common: Screech Owl, Barred Owl, Barn

Owl, and Great Horned Owl. Two are uncommon: Long-eared and Short-eared Owls; and two, Snowy Owl and Saw-whet Owl, are rare. Another species, the Burrowing Owl, has occurred once, when one of them came aboard a naval vessel off Hampton Roads on October 22, 1918.

The sexes of our eight species of owls are alike in coloration, except that the female Snowy Owl is more heavily marked than the male and the female Short-eared Owl more richly colored than her mate. Females are normally heavier than the males, as is also the case with hawks. Owls have large heads and powerful bills and feet. The wings are large, with the feathers so closely knit together that the flight is practically noiseless. The eyes are fixed in bony cups in their sockets, so that the eyeball does not turn and the bird must turn the whole head in order to change its line of vision. The hearing is exceptionally keen. It is a simple thing to attract a Screech Owl by imitating the low squeak of a mouse. All owls are nocturnal, although a few species, notably among them the Short-eared Owl, also hunt by day. It is a mistaken notion, however, that an owl cannot see in daylight; and just as mistaken an idea to think that an owl can see in pitch dark.

Owls do not build their nests. They utilize hollows in trees, artificial nesting boxes, sheltered places in buildings, or old nests of squirrels, crows, and hawks. The Snowy and Short-eared Owls nest in the open on the ground. The eggs are always white

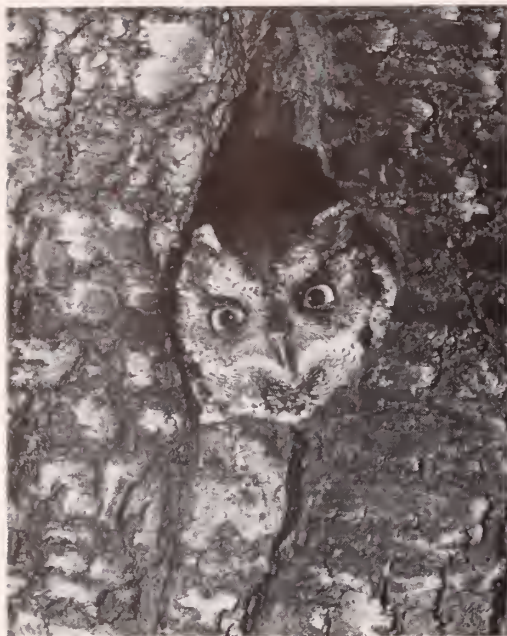


Photo by Allan D. Cruickshank from National Audubon Society

Screech Owl



American Museum of Natural History

Snowy Owl



American Museum of Natural History

Great Horned Owl

and rather wide in proportion to the length. Young birds are always covered with a thick white down. While owls do not migrate to the same degree that most song birds do, it has been discovered that in many species there is a general southward movement in winter, in addition to the periodic wanderings of the more northern species.

Barn Owl—*Tyto alba pratincola*

From time to time some hunter shoots what he considers to be a rare and fantastic bird and brings it in to the local newspaper for a dramatic story of the bird that has a face like a monkey. This 'monkey-faced owl,' or Barn Owl, is a resident and fairly common throughout Virginia. It is the lightest in color of all our owls except the rare Snowy. In flight at night it appears white, but in reality its plumage is a beautiful mixture of black and white and yellowish-buff, shading into a score of delicate colors and making one of the most lovely wing patterns to be found in nature. Its color plan is more like that of a moth than of a bird. It is the queer, elongated facial disks that give rise to the name, "monkey-faced owl." The Barn Owl has a wing spread of 43 to 47 inches.

The Barn Owl nests in hollow trees, attics, barn lofts, and towers of churches and other buildings. It is not often found far from the haunts of man. The note is a shrill, hissing screech. Families of young birds in the nest can often be located by this sound.

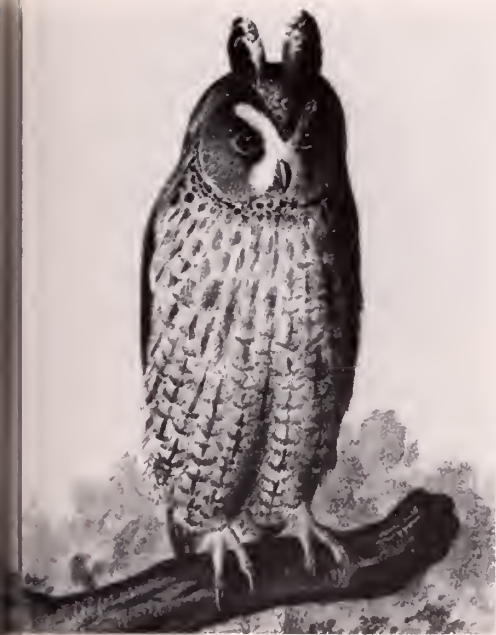
While they occasionally take a bird, or still more rarely a barnyard fowl, their food, as with all owls, consists chiefly of mice and other small mammals.

Major Bendire in his famous work on American birds says that the number of harmful animals required to rear a family of five to seven young Barn Owls is almost incredible, exceeding the work of a dozen cats. For at least 60 years a pair of these owls have nested in one of the red towers of the old Smithsonian building in Washington. Back in 1893 Dr. A. K. Fisher collected 200 of the pellets which had been regurgitated by these birds. In them he found 454 skulls, comprising 225 meadow mice, 2 pine mice, 6 jumping mice, 20 shrews, 179 house mice, 20 rats, 1 star-nosed mole, and 1 Vesper Sparrow.

Screech Owl—*Otus asio*

The little Screech Owl is our most common member of the family. There are two geographical races, or subspecies, in Virginia: the eastern Screech Owl, *Otus asio naevius*, found only in the higher and more northern parts of western Virginia; and the Southern Screech Owl, *Otus asio asio*, distributed throughout the rest of the state. There are two color phases in this bird, the red and the gray. The difference in color is not due to sex or age or season or locality. In fact, its cause is not known, nor is it known whether or not the color passes down according to the Mendelian Law. Although red and gray phases are often found in one family group, the colors do not mix. The length of this owl varies from 6½ to 10 inches, and the wing spread from 18 to 24 inches.

Although common, the bird is more often seen than heard. It is best known from the eerie noises that it makes, sometimes a shivering wail, sometimes



Long-eared Owl



Short-eared Owl



U.S.F.W.S. Photos

Barred Owl

hoarse barks and screams, and often a rolling shinny, like the sound of a plate rocking on its base. During the day the bird sits quietly on a branch against the trunk of a tree, almost invisible, and only moving when some marauding jay discovers it and with shrieks of denunciation calls a mob of small birds to join in harrassing their handicapped enemy. When night falls, however, it comes forth to hunt like a shadow among the trees, until it pounces upon some unlucky mouse. It nests in a hollow tree, laying from four to six white eggs. It is sometimes vicious in its attacks upon the man who comes near its young. Many an observer has had his hat knocked off or even his scalp laid open by its big claws.

Most of the year the Screech Owl feeds on mice. Only when a nest full of hungry youngsters put pressure on the parents do they prey upon birds, and then only rarely on any game or domestic species. I skinned one once in winter that had its stomach crammed with hard grubs. Dr. Arthur Allen and some of his students at Cornell spent a great deal of time studying the nesting of a pair of these owls. They found that the parents brought food to the nest from 20 to 75 times each night.

Snowy Owl—*Nyctea nyctea*

The Snowy Owl is the only really white owl, although even in this species the plumage is practically always streaked with brown or black and sometimes heavily marked. It is the largest of the owls that occur in Virginia, averaging over ten per cent larger than the Great Horned Owl, though not so power-

ful as that bird. It runs from 20 to 27 inches in length and from 54 to 66 inches in wing spread. The Snowy Owl is a bird of the Arctic wastes, subject to periodic southward migrations because of the lack of food in the far North and the consequent pressure of its population. Last winter the Eastern United States experienced such an invasion. Few birds, however, come as far south as Virginia. This owl eats anything it can catch, but it is too scarce to be of any economic importance in our state.

Great Horned Owl—*Bubo virginianus virginianus*

The great Horned Owl is probably our most powerful bird. Although a duck hawk might be able to knock it out from the air, there is possibly no bird, from the eagle down, that would be its equal in close combat. It is from 18 to 23 inches long and has a wing spread of 35 to 50 inches. It is common in all wilder sections of the state where there are forests with large trees. The common note of the 'Hoot Owl' as it is often called is a deep resonant "Who-who-who-who," but it sometimes gives loud and blood-curdling screams. Dark in color, the feathers have yellowish-buff markings, especially on the under parts. It has prominent ear tufts.

The Great Horned Owl nests very early, laying its eggs often as early as February, and sometimes even in January. The eggs are white and large, over two inches long and almost two inches in diameter. It nests in the largest trees available and in the most secluded situations, using almost always the old nests of one of the larger Hawks.

This Owl will eat any living creature up to the size of a large cat. It has been known to take cats. The rabbit is probably the most favored item in its diet, as it is easy to capture and makes a good meal. It is also very fond of skunks. I have rarely handled one of them that did not still have the powerful odor on its feathers. It can be very hard on poultry when they are not very well protected, or on game and song birds. It can carry the largest hen with ease, and can even handle a turkey. At the same time, when the whole balance is struck, there are many things to be said in the bird's favor, for no small part of its food consists of the rats and mice that are among man's worse enemies.

Long-eared Owl—*Asio wilsonianus*

The Long-eared Owl is a resident in Virginia, fairly common, but is rarely seen because it is strictly nocturnal in its habits, spending the day in evergreens or in thick honeysuckle cover. It is much scarcer in summer than in winter. Half-way in size between the Great Horned Owl and the Screech Owl, it is more slender than either, with wings and tail that are longer in proportion to its size. It is a dark bird, lightly mottled with white and buff above, with the underparts broadly streaked on the breast and irregularly barred on the sides and belly. Its flight is light and wavering, like that of the next species but different from that of most owls.

Like other owls, it eats a few birds. One that was brought to me had a mourning dove in its stomach. However, eighty to ninety per cent of its food consists of injurious rodents, and so it is very beneficial to the interests of man. There seems not to be a single record of poultry in its bill of fare, only one record of the Bob-white and two of the ruffed grouse.

Short-eared Owl—*Asio flammeus flammeus*

The Short-eared Owl is most commonly a bird of the coastal marshes, because there it finds the wide open spaces in which it loves to hunt the small mammals that are its chosen prey, yet during migration and in winter it may be found almost anywhere in Virginia. It is scarce in summer in our area, nesting occasionally along the coast and more rarely inland. A nest with one or two eggs was found at Leesburg on April 17, 1950. During the 1949 Christmas Bird Census at Lexington we came upon two of these owls in a pasture where the grass was high. As is their custom when not hunting, they would perch on the ground. After a short rest they would rise and on wide, noiseless wings course back and

forth across the meadow, ready to pounce on any little meadow mouse that was foolish enough to make a move. As we left one of them flew across the road high above us, its striking pattern outlined against the dying colors of the sunset. On a later date four were found in the same field.

This is the only owl that habitually occurs in flocks. As many as a hundred have been seen together. It is also our only owl that habitually hunts in broad daylight. It nests on the ground, and rarely perches on anything higher than a fence post. The song, which I have not heard, is said to be a monotonous series of fifteen or twenty toots. It is almost entirely beneficial in its food habits. Of 101 stomachs examined by Dr. A. K. Fisher 14 were empty, 11 contained small birds, while 84 had mice and other little mammals, and 7 had insects.

Northern Barred Owl—*Strix varia varia*

This is another of our more common Owls. It is somewhat smaller than the preceding species, with a length of 17 to 24 inches and a wing spread of 40 to 50 inches. It is a grayish brown on the back, each feather being marked with whitish bars. The underparts are lighter, the breasts being marked with bars and the belly with streaks of brownish black. The legs and feet of the northern race are feathered. There are no ear tufts. The feathers, especially on the head, are loose, making the bird appear larger than it is.

One of the most attractive things about this owl is its wild, strange call. The bird is very noisy, calling even in daylight on dark days, during its mating season. Sometimes its calls sound like a mixture of laughs and screams. One of the common calls is often translated, "Who, who, who cooks for you all?"

Saw-whet Owl—*Cryptoglaux acadica acadica*

This tiny owl, smaller than a robin, is a scarce winter visitor to Virginia. Every winter a few are seen. I have the skin of one which was picked up dead by Kenneth Ellis on the Cascades Golf Course near Hot Springs. This spring, in March, one was photographed in the city of Richmond. It is like a little Screech Owl, but without ear tufts, dark cinnamon brown in color above and somewhat lighter below. During the day it hides in thick evergreens. The name comes from its queer note, which sounds like the noise made in filing a saw.

The owls of Virginia are an interesting and integral part of the fauna of the state. Remember, when the balance is struck, man benefits far more than he loses through the work of these birds of the night.



DINGELL BILL FOR FEDERAL AID FOR FISHERIES FINALLY ENACTED INTO LAW

After a long hard fight by sportsmen, conservationists, and other exponents of better fishing in the U.S., the Dingell Bill providing Federal aid to fisheries has finally been enacted into law.

The bill, jointly sponsored by Representative Dingell (D-Mich.) and Senator Johnson (D-Colo.) earmarks revenue from the Federal 10 per cent tax on sports fishing tackle. Such revenue, estimated at from \$3,000,000 to \$4,000,000 a year, will go back to the states to help them restore and expand game fish resources. President Truman signed the bill into law on August 9th.

Carl Shoemaker, conservation director for the National Wildlife Federation, said that the enactment of this bill is the third most far-reaching conservation measure Congress ever has passed affecting wildlife. The others were the migratory bird treaty of 1918, and the Pittman-Robertson bill of 1937 which provided states with funds for wildlife development. Over the years the new Dingell bill is expected to produce better fishing for everyone. Albert M. Day, director of the United States Fish and Wildlife Service, called the bill "the most forward-looking step in sport fishing legislation in many years." "It is one of the few outstanding pieces of conservation legislation in the history of wildlife management," Day stated. "It is a companion measure to the Pittman-Robertson Act, and should make that program much more effective."

Under the Pittman-Robertson program, the states share in \$8,000,000 to \$10,000,000 a year in revenue from a Federal tax on arms and ammunition. This money is spent in acquiring and maintaining wildlife refuges and development projects. Sportsmen long have urged a similar program for fish. With the passage of the new bill such a pro-

gram now will become a reality.

States will probably use both sources of revenue for acquiring land and impounding water for refuges that affect both fish and wild animals. The states also have indicated they will use the funds for stream improvement, pollution abatement, stocking of streams, and other development work. However, all projects must be justified as to need and worth, and since the appropriations by Congress are subject to budgetary needs, increased expenditures for military or other emergency purposes could affect the payments to states. The Fish and Wildlife Service will confer with state officials and be guided by their desires in setting up its administration of the program.

The Treasury Department objected to the new bill on the grounds that fishing-tackle tax returns never had been segregated, and therefore a year's postponement would be necessary. Accordingly, the new act will become effective July 1, 1951, at which time the first apportionment to states may be made. The money will be distributed to the states on a formula based on area and the number of licensed fishermen. The new act also provides for annual payments of up to \$75,000 to Alaska, \$12,000 to Hawaii and \$10,000 each to Puerto Rico and the Virgin Islands, for similar fishery development. The Federal appropriation may cover only 75 per cent of a project. The states must match the allotments to the extent of 25 per cent.

Because the funds are not yet available and are only estimated it would be impossible at the present time to give any figure on the amount of aid Virginia may expect from the program. However, such funds as will be received will probably be expended on the construction and maintenance of fish hatcheries and rearing ponds, on the construction of more public fishing ponds under Virginia's pond-a-year program and on scientific research in the fisheries field.



New Machine Shows Promise In Game Management Work

In early August foresters and wildlife men interested in forest game management witnessed a demonstration of a unique piece of power equipment which offered possibilities for use in developing wildlife clearings on national forests. This equipment is known as a Pulvi-mixer and operates very much like an over-sized garden rototiller.



Photo by H. S. Mosby

The Pulvi-mixer tears up forest vegetation in a demonstration for game management personnel.

The conservation group observed the machine tear up sodded areas, small laurel thickets, and pulverize the soil in rockstrewn woodrow, in the North River section of the George Washington Forest.

Claman Leaves Harrisonburg

John C. Claman, Administrative Assistant for the George Washington National Forest has been transferred to the Regional Office, U. S. Forest Service, at Philadelphia, Pennsylvania. In commenting on this move, Forest Supervisor E. M. Karger stated that Mr. Claman's new position will be that of Regional Fiscal Accountant and Auditor.

Mr. Claman has been on the George Washington National Forest for six years, where he has been in charge of office management. He is a graduate of Bristol Commercial College, Bristol, Tennessee, and has had sixteen years' experience with the Forest Service.

Migratory Bird and Waterfowl Regulations Announced for State

Virginia's duck, goose, and coot season will open November 27 and run through January 5. The season was set August 29 when President Truman signed the annual duck hunting regulations for the entire nation.

The season on other migratory birds in Virginia is as follows: Sora, other rails and gallinules, September 1 to October 30; woodcock, November 20 to December 19; doves, October 2 to October 31.

Shooting on opening day for waterfowl and coot will not begin until 12 o'clock noon.

On doves the 12 o'clock noon starting time will continue throughout the season. No morning shooting will be allowed.

Bag limits on migratory birds are as follows: Geese, daily bag and possession two. No snow geese or brant may be taken. Ducks, daily bag limit four, possession limit eight after first day. Sora, daily bag and possession limit 25 birds. Other rails and gallinules, 15 daily in the aggregate, both bag limit and possession. Doves, daily bag limit and possession, 10 birds.

Million Dollar Camp Proposed at Claytor Lake

Preliminary plans for a proposed \$1,000,000 youth and adult camp at Claytor Lake have been presented to the V. P. I. committee in charge, and to a representative group of Agricultural Extension agents in Southwest Virginia.

W. H. Daughtrey, chairman of the committee, and associate director of the Extension Service, said the camp would be designed in two sections to serve 250 adults and 250 young people.

When constructed, the camp facilities would be available to agricultural, industrial, professional, and other groups for meetings, seminars, recreation, and similar purposes.

The camp would be located on a 90-acre tract of land, donated to V. P. I. by the Appalachian Electric Power Company in 1947. The deed for the property states that it shall be used as a "non-profit, educational and recreational camp primarily for the benefit . . . of groups whose programs are such as to result in benefit to the people of Virginia."

Fish Thieves Beware—Hatchery Men Wide Awake!

You've heard of the big catch that got away—but here's the story of some fish thieves who *didn't* get away!

At just about five o'clock in the morning, March 21 of this year, Federal Game Warden D. G. Fauber, who was engaged at that time in stocking the streams of the George Washington National Forest with fish, was awakened by a furious knocking on the door of his room at the home of Mr. B. O. Carper, at New Castle, and a voice calling to him to "get up quickly, some rascal is stealing my fish!"

The warden opened the door to Roy Carper, the fish culturist in charge of the nearby fish nursery, but not waiting to hear any of the details of the theft, immediately tried to get in touch with the state police. Getting no answer to his telephone call, he called Sheriff Abbott, who promptly got into action.

Mr. and Mrs. Carper had joined Warden Fauber and Roy, and in the meantime, the wife of the state game warden, Mrs. C. Watts Surber, had come onto the party line and had been informed of the incident. Inasmuch as the homes of both the state game warden and the sheriff were only about three miles from the scene of the crime, and in the direction taken by the suspects, Federal Warden Fauber let these two officers take over, and waited in his old truck for word from them.

In exactly forty minutes Sheriff Abbott called in to say that the suspects' car had been apprehended, but the occupants proved to be two state highway employees who were returning to their headquarters after an all-night sanding job on the icy roads in the area. They had stopped at the fish nursery to look at the fish, and were just leaving when the Carpers had noticed their car and suspected them of being poachers.

Moral: if you want to get caught as a suspected law violator, just take a trip to Craig County and loiter around Roy Carper's fish nursery.

State Open Casting Tournament for Norfolk

The Tidewater Anglers Club of Norfolk will be host to the second Virginia State Open Casting Tournament in Norfolk on Sunday, October 15.

This meet will probably be the last State Tournament held in the country this year, and as such, will be a test ground for some of the 1951 innovations planned by the National Skish board at their Miami meeting.

The program will include bait and fly distance, bait and bass bug accuracy, all under Skish rules, surf casting, the popular Virginia saltwater game "Cape Charles," and a new two-handed light saltwater game, featuring two-ounce sinkers and rods with sections not over 64 inches long.

Contestants will be divided into three classes, A, B, and C, based on skill, and prizes will be awarded in each class.

Late Season Trout Fishing Pays Off

James O. Campbell of Aldie, President of the Outdoorsman Rod and Gun Club, sends us graphic proof this month that trout fishing doesn't end in the Old Dominion after opening day. The accompanying picture of Elmer Phelps of Fort Belvoir with his limit of rainbow trout tells its own story. The fish were taken from Barbours Creek in Craig County and according to President Campbell, "there are plenty more 16-inchers just like them if you know your fish."



Elmer Phelps of Fort Belvoir, Outdoorsman Rod and Gun Club member, cleans his limit of rainbow trout taken from Barbour's Creek in Craig County.

Members of the Outdoorsman Club are topnotch sportsmen, active in conservation work and in the protection and propagation of fish and game. Their present program, according to Mr. Campbell, includes doing more habitat improvement work for game, and trying to increase the amount of suitable fishing water in the state.



for
Students
Teachers
Parents



S.C.S. Photos

Before and after: a good example of soil conservation work that is also good wildlife conservation work.

LESSON 4 EVOLUTION OF WILDLIFE CONSERVATION

Although the science of wildlife management in its present form is a comparatively new field, mention of wildlife conservation can be found early in world history. Moses decreed, (Deuteronomy 22:6) "When a bird's nest chance to be before thee in the way . . . with young ones or eggs, thou shalt not take the dam with the young . . ." This statement is part of the Mosaic Law and its obvious intent was to conserve the breeding stock or seed, while harvesting the crop.

Wildlife management has been defined as "the art of making land produce sustained annual crops of wild game for recreational use." Game management consists of controlling those factors—mainly food and cover—which hold down the natural increase of wild birds and animals. Without food and cover, wildlife cannot increase or even survive and no amount of stocking of artificially reared game can change this.

The passing of the centuries has revealed that hunting restrictions alone will not prevent a decreasing supply of game, and man's next step in attempting to preserve wild-

life was to attempt to control predators, those birds and animals that kill for their food. Later came the setting aside of refuges and sanctuaries, followed by artificial restocking with wildlife raised on the game farm. The fifth and final stage of the development of the game management idea, resorted to when all others have apparently failed, is the control of food, protective vegetation, special factors, and disease.

A complete game management program will naturally combine all of the control mentioned above. Restriction of the kill through hunting regulations is essential. A proper balance between predators and desirable game species must be maintained. A system of refuges is an important part in the management of many species. Artificial restocking has its place in the restoration program. But it is important that sportsmen as well as professional game managers realize that the greatest benefit can be derived from these four practices only when they are combined with effective environmental control which will provide the game with its requirements for food, protection, and other needs for 365 days a year. Once such a suitable wildlife habitat is provided, it will be

much less difficult to maintain an adequate supply of wildlife to occupy it.

BIRD OF THE MONTH Sparrow Hawk

Good things come in small packages. This certainly applies to the sparrow hawk, a year round resident of Virginia.

Misnamed, this little fellow, scarcely larger than a robin, kills sparrows and other small birds only during the winter when grasshoppers and mice are absent or hard to find. Insects and rodents make up over 80 per cent of its diet.

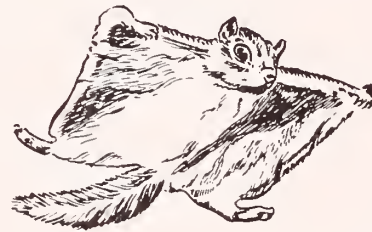
Often mistaken for a mourning dove, because of its slim pointed wings and slender tail, this little falcon is our smallest North American hawk. Sparrow hawks lay their eggs, four or five in number, in sheltered places. Abandoned flicker holes are preferred for nesting but the spotted eggs, from white to cinnamon in color, may be found in natural tree cavities, small holes in cliffs and clay banks and even in the corners of buildings or in large bird boxes.

During the September and October months, the numbers of Virginia's sparrow hawks are augmented by migrants from the north although many remain in the colder climates. Those adaptable birds that linger in the north often take up winter residence in the larger cities. Roaring traffic and forests of tall buildings are no obstacle to the colorful sparrow hawk.

It is only during this winter visit with its cousins, where grasshoppers are absent and mice hard to find that this hawk lives up to his name by eliminating from the city a few raucous English sparrows.



CHIPMUNKS HAVE BIG
CHEEK POUCHES USED
FOR CARRYING FOOD



SPREADING FOLDS OF
SKIN ENABLE FLYING
SQUIRRELS TO GLIDE

SQUIRRELS



FOX SQUIRRELS PREFER
LIVING NEAR HARDWOODS



EXPERTS DO NOT AGREE
ON HOW GRAY SQUIRRELS
FIND NUTS THEY BURIED

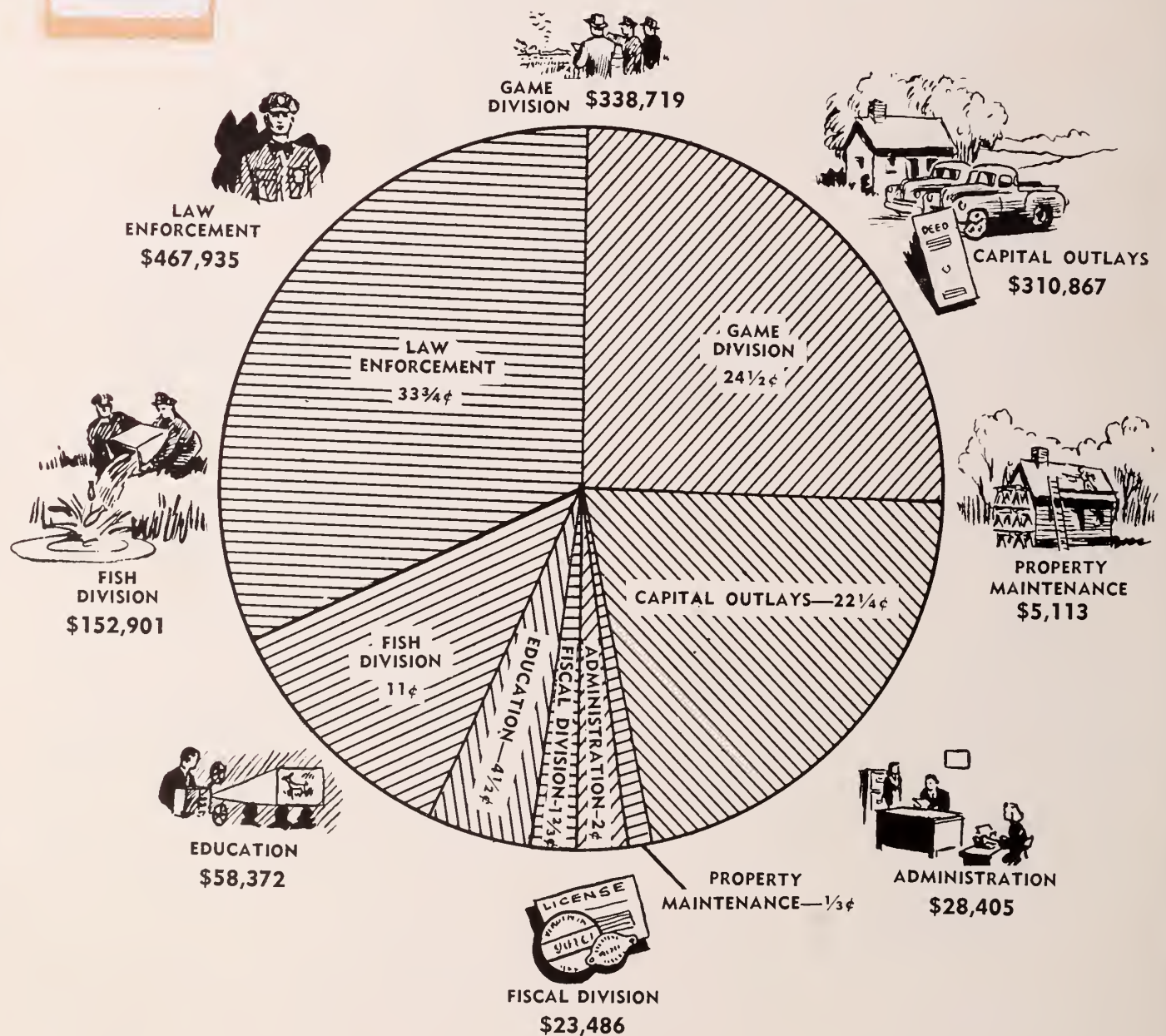


THE FROLICSOME RED
SQUIRRELS ARE ALSO
CALLED "CHICKAREES"

SPORTSMAN'S *Dollar*

FISCAL YEAR 1949 - 1950

Out by t and graphic form is a report to the sportsmen of Virginia showing how each dollar was spent during the fiscal year 1949 and 1950. Money expended was obtained from hunting sales, 15 per cent of income from dog licenses, federal aid and sale of publications.



TOTAL EXPENDITURES—\$1,385,798